

5.3 Public Services and Utilities

WAC 463-42-382 Built environment -- Public services and utilities. *The applicant shall describe the impacts, relationships, and plans for utilizing or mitigating impacts caused by construction or operation of the facility to the following:*

- (1) Fire;
- (2) Police;
- (3) Schools;
- (4) Parks or other recreational facilities;
- (5) Maintenance;
- (6) Communications;
- (7) Water/storm water;
- (8) Sewer/solid waste;
- (9) Other governmental services or utilities.

5.3.1 Introduction

This section presents an analysis of existing public services and utilities in Kittitas County including Easton, Cle Elum, Roslyn, Kittitas, and Ellensburg, and potential impacts associated with construction and operation of the Kittitas Valley Wind Energy Project (Project). The evaluation includes fire protection, police, medical services, schools, communications, sewer, solid waste, and water supply services. In addition, recreational facilities within approximately 25 miles from the center of the Project, and in some cases, recreational facilities that are beyond the 25 mile radius were included in this section.

The impacts to maintenance of roads is fully describe in Section 5.2, ‘Transportation’.

5.3.2 Existing Conditions

5.3.2.1 Police Services

The Kittitas County Sheriff’s Department and the Washington State Patrol provide law enforcement services for the entire county, except for some cities that provide their own law enforcement—Cle Elum, Roslyn (covered by Cle Elum), Kittitas, and Ellensburg. All state highway routes (SR-97, SR-970, SR-10, SR-821, I-90, and I-82) are patrolled by the Washington State Patrol. The Project is north of SR-10 and has wind turbines on both sides of SR-97, north of Ellensburg. The Project is southeast of SR-970. The County Sheriff’s Department serves the unincorporated areas of Kittitas County.

The law enforcement services provided by the County Sheriff’s Departments include traffic control, drug enforcement, search and rescue, and civil calls. The Sheriff’s office has recently implemented a traffic safety program and is in the final stages of developing a proposal for a criminal justice facility in the area (Deputy Meyers). Other county services include a K9 unit, SWAT team, marine patrol, and search and rescue (Carolyn Hayes). The Washington State Patrol provides traffic enforcement on state highways and drug enforcement, Hazardous Materials Team (HAZMAT) oversight, and incident response. The Washington State Department of Ecology in Yakima (approximately 35 miles south of Ellensburg) provides a HAZMAT response team.

Sheriff Gene Dana heads the Kittitas County Sheriff's Department. He has 25 deputies on patrol, three detectives, a criminal chief, and an under sheriff. All officers are state-certified, and many have additional training for drugs, search and rescue, traffic control, and accidents. The Sheriff's Department is state accredited and has recently received federal certification.

5.3.2.2 Fire Services

There are three fire districts in the Project area—Fire District No. 1 (Rural Thorp), Fire District No. 2 (Rural Ellensburg), and Fire District No. 7 (Cle Elum). The only district which turbines are proposed for is Fire District 1, where approximately 19 turbines are proposed. There are approximately 25-30 turbines proposed on Department of Natural Resources' (DNR) property, and that area would be under DNR's jurisdiction for fire control. The remaining turbines of the Project are outside of any fire district or DNR property (see Exhibit 19 'Fire Districts'). The City of Ellensburg also has its own fire department.

Fire districts are staffed primarily by volunteers. Fire District 2 has a full-time paid Fire Chief, Stan Baker. Fire District No. 1 has a paid part-time fire chief, D.J. Evans. The City of Ellensburg's fire department staff is fully paid. All rural volunteer fire fighters carry pagers and are notified through the county's 911 service. Fires that occur most frequently are related to wild land fires (grass, brush, and timber), vehicle fires, and structural fires. District fire departments also receive calls for boating (District No. 1 responds to fires on the Yakima River and District No. 2 responds to fires on the Columbia River, near Vantage) and hunting accidents; emergency medical situations such as heart attacks; recreational mishaps; propane spills and fires, and assistance to the State Patrol for HAZMAT. The majority of fires are man-made or caused by arson, with only a few naturally occurring fires, i.e., lightning. There have been fires in the Project area during the last five years (Fire Officials Meeting Notes, August 7, 2002).

All fire districts have emergency medical equipment and extraction equipment for auto accidents. Most fire districts have minimal services (equipment and personnel) for search and rescue. All districts have bimonthly or monthly training meetings. None of the rural fire districts have received special training for fires that might occur in the nacelles of wind turbines. Fire District No. 2 has Basic Life Support (BLS) services. Fire District No. 1 is working towards a BLS (DJ Evans, Fire Chief, Kittitas Fire District No. 1).

All rural county fire districts have mutual aid agreements with neighboring districts and with the City of Ellensburg's fire department. District No. 1 and District No. 7 have contracts with specific landowners. District No. 2 does not have any landowner contracts.

The Department of Natural Resources (DNR) has warning levels that indicate the fire danger on their property (Township 19N Range 17E, Sections 10 and 16 that have public access, and Sections 2 and 22 that have restricted access) The restricted access designation occurs because private property owners must allow access across their land, because there is no legal public access to those parcels. At a Level Five, total shutdown is expected in DNR's entire zone of control, including industrial activity. Spark arresters are required for power equipment (e.g., cutting torches, chain saws, and cutting tools) (Chris Taylor, Zilkha and Fire Officials Meeting Notes, August 7, 2002).

5.3.2.3 Medical Services/Hospitals

Kittitas County Community Hospital in Ellensburg serves the entire County. There are 50 licensed beds, but only 36 are set up to be used, and those beds are not used to capacity. The

hospital has Level Four trauma service, with a limited number of specialists available. Patients with head injuries, severe burns, and/or trauma are transported to a different facility, i.e., Harbor View Medical Center in Seattle. Less severe accidents are sometimes transported to Yakima for hospitalization and treatment. There is a heliport on the roof of the hospital, and a helicopter is available for emergency response (Eric Jensen, Kittitas County Community Hospital administrator, personal communication).

The City of Ellensburg fire department provides emergency medical services (EMS) for the entire County and bills patrons for services received that may include treating falls, burns, fractures, lacerations, and heart attacks. Ambulances are located at Ellensburg, and the towns of Kittitas and Cle Elum. Also, Cascade Search and Rescue is located in Ellensburg. Emergency calls are dispatched through the Sheriff's office to the fire districts, which provide search and rescue support.

5.3.2.4 Schools

School districts within the Project area include District 400 (Thorpe), District 401 (Ellensburg), and District 404 (Cle Elum/Roslyn). School bus routes use federal, state and county roads near the Project for student transportation to the schools. Further details on schools and their services are not provided because there will be no significant impact to local schools as a result of the Project. Construction workers who arrive from out of the area are only expected to do so on a temporary basis, and not relocate their families to the area. Of the total 16 to 18 workers required during operations, up to half are expected to be from the local area. Therefore, no enrollment impacts on schools are anticipated. (See Sections 8.1 'Socioeconomic Impact' and 2.12.4 'Operations and Maintenance Labor Force' for more details).

5.3.2.5 Recreation

Table 5.3.2-1 provides a list of recreational facilities and activities available within a 25-mile radius of the Project site or beyond; the radius is centered somewhat near the middle portion of the Project (see Exhibit 20 'Recreational Areas') This study area covers forests and wilderness areas, wildlife areas and refuges, boat launches, beaches and other water use sites, state parks, town parks, campsites, and museums. Ski areas are available beyond the 25-mile radius, at Snoqualmie Pass and Mission Ridge.

Washington State campgrounds are operated on a first-come, first-served basis, and state regulations limit overnight stays to 10 days. The U.S. Forest campgrounds exceed their capacity almost every weekend during the summer and often turn people away (Lucy Schmidt, U.S. Forest Service). National Forests have a 14-day limit on camping. After that, campers must leave the campground for at least 24 hours before returning.

Recreational facilities or activities available near the Project area are as follows:

- Ellensburg Golf and Country Club;
- Carey Lakes Golf Course;
- Horseback riding along Iron Horse Trail/John Wayne Trail;
- Racquet and Recreation Center;
- Swimming Pool/Fitness Center;
- The Sun Country Golf Resort in the Cle Elum/Roslyn area.

Summer recreational activities include water sports such as fly fishing, swimming, boating, river rafting, gold panning, and water skiing; as well as camping, mountain biking, hay rides, hiking, horseback riding, hunting, biking, picnicking, bird watching, rock hounding, berry and mushroom picking, softball, and other team sports. During the winter, recreational activities include cross-country skiing, horse-drawn sleigh rides, inner tubing, snowshoeing, skiing, sledding, snowboarding, and snowmobiling. There are no fishing sites within the properties of the Project.

Table 5.3.2-1
Parks, Recreational Facilities, and Activities within 25 Miles of the Kittitas Valley Wind Power Project Facility

Ellensburg City/Community Parks/Campgrounds

Burlington Northern Square	Reed Park
Catherine Park	Rotary Pavilion
Irene Rinehart Riverfront Park	Sagebrush Trail
Kiwanis Park	South Main Entry Park
Lions/Mountain View Park	West Ellensburg Park
McElroy Park	Whitney Park
Memorial Park	Wippel Park
Paul Rogers Wildlife Habitat Park	Skate Park
KOA Campground (private campground)	

Ellensburg Museums

Children's Activity Museum	Olmstead Place State Park and Heritage Center
Clymer Museum and Gallery	Thorp Mill (located in Thorp)
Kittitas County Museum	

Cle Elum/Roslyn City/Community Parks/Campgrounds

Cle Elum City Park	Whispering Pines (private campground)
South Cle Elum City Park	Trailer Corral (private campground)
Roslyn City Park	

Cle Elum/Roslyn Museums

Carpenter Museum	Salmon La Sac Guard Station Restoration
Cle Elum Historical Telephone Museum	South Cle Elum Depot Restoration
Roslyn Museum	

State Parks

Olmstead Place State Park	Squilchuck State Park
Ginkgo State Park (no camping)	Lake Easton State Park
Wanapum State Park	Iron Horse State Park (no camping)

U.S. Forest Service (Okanogan and Wenatchee National Forests)

Crystal Springs	Mineral Springs
Kachess	Swauk
Owhi	Ken Wilcox at Haney Meadows
Fish Lake	Lion Rock
Salmon La Sac	Taneum
Cayuse	Icewater
Red Mountain	Taneum Junction
Cle Elum River	South Fork Meadow
Wish Poosh	Tamarack Spring
De Roux	Riders Camp
Beverly	Manastash
Red Top	Quartz Mountain

5.3.2.5 Public Utilities

The study area defined for public utilities is Kittitas County. Puget Sound Energy (PSE) and Kittitas PUD No. 1 provide electrical services within the county, except for the City of Ellensburg, which provides its own electrical service. The Project will connect either to the Bonneville Power Administration or PSE transmission system.

5.3.2.6 Communications

Telephone services near the Project are currently supplied by Ellensburg Telephone. Cellular phone service is available from a variety of providers. DSL internet service is provided by Ellensburg Telephone in its service territory and Inland Internet in Cle Elum, Roslyn and Ronald.

Newspapers published and/or distributed in the area include the *Daily Record* (Ellensburg daily newspaper), *Northern Kittitas County Tribune* (weekly), and *Snoqualmie Pass Times* (weekly).

Cable television services are provided by Charter Communications in Ellensburg, R&R in Roslyn, and TCI in Cle Elum. Broadcast television service in the Project area is available for Channels 25, 31, 39, 41, 51, 54, 63, and 69. All of these stations are UHF channels and are broadcast from transmitter antennas located south and east of Ellensburg. Reception quality varies greatly based on local topography and distance from the transmitter antennas.

Radio transmission reception quality varies throughout Kittitas County.

5.3.2.7 Public Water Supply/Stormwater Systems

A description of existing public water supplies within the County is not provided because none of the public water utilities will be used. Water during construction will be supplied by the construction contractor. An on-site domestic well is proposed for the operations and maintenance facility during operations.

There are no existing stormwater systems at the Project.

5.3.2.8 Sewage/Solid Waste Disposal

A description of existing community sewer systems within the county is not provided because none of the public utilities will be used. Sanitary wastes will be collected in “portable toilets” during construction, and an on-site septic system for the operations and maintenance facility is proposed for operations.

Solid waste collection services are provided by two transfer stations, one in the upper county (Cle Elum) and one in the lower county (Ellensburg). The transfer stations are operated by Waste Management and they do not accept hazardous wastes. There are drop boxes for recycling at both transfer stations, but mixed paper recycling is not offered. A new transfer station is planned in the upper county. The local county landfill is closed (Lisa Bach, Kittitas County Solid Waste Programs).

5.3.3 Impacts of the Proposed Action

5.3.3.1 Police

5.3.3.1.1 Construction

Construction activities associated with the Project will increase traffic volume on roadways surrounding the Project area, as a result of both commuting construction workers and the transportation of materials. This increased volume will occur in mid-summer to fall, in addition to current peak demands during the summer months when vacationers use the roadways. It is possible that the number of accidents and calls for service along major roadways (SR-97, SR-10 and, I-90) will increase for about six months, when most of the on-site work will be done. Enforcement activities may peak when employees peak, at about 160 employees for about one month. Since the period of time for construction is short, existing staff should likely be able to provide the adequate enforcement services. The Applicant will consult with the County regarding the impact on County staffing. If additional staffing is required the Applicant proposes to mitigate by prepaying taxes in a sufficient amount to provide adequate staffing levels during construction.

Out-of-area workers are not expected to move their families into the Project area because each craft will be completed within three and one half months or less. They will either commute (from the Seattle area or Yakima area) or stay in temporary housing (RV parks, hotels, motels, or campgrounds) for the period of time needed to complete their tasks. Also, of the total workers, there will be approximately 60 workers that will erect the turbine towers within about four months. These workers will be from out-of-state because specialized workers are required for this type of work and, therefore, they are expected to stay in temporary housing. Based on most workers not changing their family residence, traffic violations are expected to be the largest concern for police enforcement. There should be minimal need to increase civil law enforcement, as well as minimal need for additional jail space. Traffic enforcement should be manageable with existing staff or temporary part-time staff for the Washington State Patrol and the Sheriff's Department. As stated above, since the period of time for construction is short, existing staff should be able to provide the additional law enforcement services.

5.3.3.1.2 Operations

Because the number of employees during operations will range from 12-16 workers, there will be no significant impacts to law enforcement.

5.3.3.2 Fire Services

5.3.3.2.1 Construction

Because of the number of workers and the construction activities occurring in an area susceptible to wild land fires, there is increased potential for calls for emergency fire services. Local fire districts have sufficient staff to meet this increased demand. There is little or no potential for nacelles to catch on fire during construction, as they will not be operating yet.

Turbines located on DNR property are under the fire protection of DNR. There are turbines outside of a fire district, currently without contracted service protection, and these properties would be more vulnerable to the spread of fire. The Project intends to contract with local districts for fire protection during construction.

5.3.3.2.2 Operations

Impacts from fire, either from a turbine or wild land fire in the Project area, could increase or be more difficult to control unless provisions are made for fire fighters to have easy access to the Project property.

Fires caused by lightning are rare when compared to manmade fires, and they usually occur on timbered ground (D.J. Evans, Fire Chief). A lightning-caused fire at the turbines is unlikely because all turbines and towers will be built with engineered lightning protection systems (Chris Taylor, Zilkha). Fires in modern turbine nacelles due to mechanical failures are also extremely rare. In the event of a nacelle fire, Project operations staff and fire personnel will not attempt to put it out but only prevent the fire from spreading to any adjacent land. This can be achieved either by use of fire suppressant material or a small controlled burn around the base of the tower.

All operations personnel working on the turbines will work in pairs. In the unlikely event that an injury occurs while working in the nacelle, all staff will be trained in lowering injured colleagues from the nacelle. A rescue basket specially designed for this purpose will be kept at the operations and maintenance facility and will be available for use by local emergency medical services personnel. Training in its use will also be provided to local EMS personnel.

5.3.3.3 Medical Services/Hospitals

Because the local hospital has capacity for additional patients and there are several ambulances available to service the Project area, there will be no significant impacts to medical services in the Project area during construction and operation. The Applicant will make arrangements with the Kittitas Valley Community Hospital for helicopter transportation service in the unlikely event that any operations personnel are seriously injured and require evacuation from a remote location within the Project area.

5.3.3.4 Schools

5.3.3.4.1 Construction

It is unlikely that construction workers and their families will relocate to the study area during construction because of the short term (maximum of three to three and one half months) of employment for each craft. Therefore, there are no impacts expected to local school districts.

5.3.3.4.2 Operations

There will be an insignificant impact on schools during operations because the number of employees who might have families moving to the area is small. Up to half of the 16-18 employees can be hired locally.

5.3.3.5 Parks and Recreation

5.3.3.5.1 Construction

Some workers may decide to camp at parks and campgrounds that allow overnight camping. These workers could displace existing recreational users. However, recreational demands

typically are higher on weekends, while workers will be more likely to use the facilities on weekdays.

In addition, it is possible that some construction workers will take advantage of the recreational opportunities within the county and throughout the region. These areas will probably include boat launches, parks, wildlife areas and refuges, and forest and wilderness areas, thereby increasing the number of users and again possibly displacing existing recreational users.

5.3.3.5.2 Operations

Some parks and recreational facilities exceed capacity now. However, there will be an insignificant impact on parks and recreation during operations because the number of employees (8-9) who might have families moving to the area is small, and these families are unlikely to be using the same recreational facility at the same time.

5.3.3.6 Utilities

Puget Sound Energy, Kittitas PUD No. 1, and the City of Ellensburg provide electric services within the County, and because electric energy needs for the Project during construction and operations are insignificant, the electric utilities will have insignificant impacts. After the Project is operating, there will be positive impacts to electrical utilities in the region from the provision of an additional source of power to the regional grid.

5.3.3.7 Communications

There will be no impacts to telephone, newspapers or cable and satellite television services in the Project area during construction and operations. The Applicant has commissioned an expert analysis of the potential for turbines obstructing telecommunications facilities in the Project area (Exhibit 14, 'Telecommunications Obstruction Analysis'.) As described in Exhibit 14, the proposed turbine locations will not obstruct or interfere with any existing microwave telecommunications facilities.

Based on the location of the transmitter antennas relative to the proposed Project, no impacts to off-air television reception is expected from construction or operation of the Project in any of the population centers in Kittitas County (Ellensburg, Cle Elum, Roslyn, Ronald, Kittitas, Thorp, Vantage, Easton, etc.) While unlikely, it is possible that the Project will affect off-air television reception in a small, sparsely populated area immediately northwest of the Project site. This area is roughly bounded by Lauderdale Junction and the Teanaway River in a recessed valley known as Swauk Prairie.

The current quality of off-air TV reception in this area is highly variable and poor in areas where the line of sight from the transmitter antennas is obstructed by local topography. The Applicant plans baseline field studies in the potentially affected area to more precisely determine the existing quality of TV reception in the area potentially affected by the wind Project (see Section 2.17 'Study Schedules'.) After the Project is built, the Applicant plans a follow-up field study to determine if the quality of television reception is degraded in this area by the Project. In the unlikely event that the Project does create any significant television reception problems for people in this area, the Applicant will develop a solution in cooperation with affected residents.

5.3.3.8 Public Water Supply/Stormwater

There will not be an impact to public water systems because none of the public water utilities will be used. Water during construction will be supplied by the contractor. An on-site domestic well is proposed for the operation and maintenance facility during operations.

There are no existing stormwater systems in the Project area. The Project will manage stormwater based on an NPDES permit for stormwater and a stormwater pollution control plan. Therefore, there will be no significant impacts during construction or operations.

5.3.3.9 Sewage/Solid Waste Disposal

5.3.3.9.1 Construction

There will be no significant impacts to community sewer systems because the Project will not be connected to a sewer system during construction and operation, and because of the small number of employees and their probable local residency during operations. Sanitary wastes will be collected in “portable toilets” during construction, and an on-site sewage disposal system for the operations and maintenance facility is proposed for operations.

There will be no significant impacts to solid waste disposal services because the construction wastes (primarily metal, cable, wire, wood pallets, and cardboard) will be stored in dumpsters until hauled away to a licensed landfill, by either the construction contractor to a transfer station or the construction contractor will contract with the local service provider, probably Waste Management, to dispose of the wastes. The volume of construction wastes is expected to be less than ten tons.

5.3.3.9.2 Operations

Solid wastes during operations will be either contracted for collection at the operations and maintenance facility, or employees of the Project will haul solid wastes to a local transfer station for disposition at a licensed landfill. Existing facilities are reaching capacity for solid wastes, but future plans for another transfer station in the upper county will provide additional capacity for the area. Solid waste generation during operations will be minimal.

5.3.4 Mitigation Measures

Potential impacts to public services and utilities will be mitigated by tax revenues generated by the Applicant. Tax revenue generation by the Project, in net present value, will include the following:

Property taxes: Based on an estimated value of \$750,000 per turbine and the 1.35 percent property tax rate in Kittitas County, it is estimated that the Project will contribute directly to an increase of \$1,221,000 in property tax revenue to Kittitas County. The estimated increase in value of other properties, as a result of the Project, will result in an additional \$85,000 in property taxes annually for the County. Thus, it is estimated that Kittitas County will receive approximately \$1,306,000 in added property tax revenue each year from the Project (see Section 8.1 ‘Socioeconomic Impact’).

Sales taxes: As construction workers and full-time employees will purchase goods and services in the Project area, increased retail sales in local communities are estimated to be approximately \$17,000. Sales taxes are also expected to increase in the Project area as a result of Project purchases (for annual operating supplies and materials) within the surrounding communities.

Should there be construction impacts requiring additional staffing levels during construction or other impacts or costs related to services which will not be covered timely by tax revenues the Applicant will enter into agreement(s) with the respect local governmental agency for prepayment of taxes for mitigation of the cost impacts. This would include fire, police and county roads.

5.3.4.1 Construction

Because construction activities at the Project are not expected to result in significant impacts to medical services, schools, public utilities, communications, water supplies, sewage/solid waste disposal, or stormwater systems, no mitigation measures will be necessary for those services or utilities.

The following mitigation measures will be implemented to reduce impacts to public services resulting from construction of the Project:

- The Applicant will provide all police, fire, and emergency medical personnel with emergency response details for the Project including Applicant contact information, procedures for rescue operations to the nacelles, and location of rescue basket.

Additionally, potential impacts to fire services will be mitigated by the following:

- Contract with fire district(s) for protection services during construction;
- Provide special training to fire district personnel for fires related to wind turbines, and to EMS personnel in how to use a rescue basket that will be kept at the operations and maintenance facility for the purpose of removing injured employees from the towers;
- Provide detailed maps that show all access roads to the Project;
- Provide keys to a master lock system that will enable emergency personnel to unlock gates that would otherwise limit access to the Project;
- Use spark arresters on all power equipment, e.g., cutting torches, and cutting tools;
- Inform workers at the Project of emergency contact phone numbers and train them in emergency response procedures;
- Carry fire extinguishers in all maintenance vehicles; and
- Coordinate with DNR when the fire danger is high.

5.3.4.2 Operation and Maintenance

During operation and maintenance of the Project, impacts to local services and utilities are expected to be insignificant. However, emergency preparedness planning will be implemented as mentioned above, to reduce potential impacts in the event of an emergency. No additional mitigation will be required.